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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,108	04/23/2001	Richard Petrus Kleihorst	PHNL-000153	2822
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PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
			EXAMINER SUKHAPHADHANA, CHRISTOPHER T	
			ART UNIT 2625	PAPER NUMBER <i>f</i>

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,108

Applicant(s)

KLEIHORST ET AL.

Examiner

Christopher T. Sukhaphadhana

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it is not a single paragraph.

Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: The specification is missing section headings. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 14 and 15** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. In regards to **claim 14**, the claimed scalable bit-stream is not directed to a process, machine, manufacture, or a composition of matter. Consider embodiment in a computer-readable medium (See MPEP 2106 IV B. 1. (a)). **Furthermore**, the limitations are directed to nonfunctional descriptive material in that they do not exhibit any functional interrelationship with the way in which computing processes are performed (See MPEP 2106 IV B. 1. (b)).

6. In regards to **claim 15**, the limitations are directed to nonfunctional descriptive material in that they do not exhibit any functional interrelationship with the way in which computing processes are performed (See MPEP 2106 IV B. 1. (b)).

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7. To expedite a complete examination of the instant application the claims rejected under 35 USC 101 (nonstatutory) are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-3, 6, 7, 14, and 15** are rejected under 35 U.S.C. 102(b) as being anticipated by Monro (WO 98/37700, cited in IDS filed 19 June 2002).

10. In regards to **claim 1**, Monro discloses a method (Fig 1) of coding a signal comprising blocks of values to obtain a scalable bit-stream, the method comprising the steps of: representing each block as a sequence of bit planes (Fig 2, and page 6, line 14), wherein most significant bits of the values form a most significant bit plane (page 6, line 15), and respective less significant bits of the values form respective less significant bit planes (page 6, line 16); and scanning and transmitting the values in an order of decreasing bit plane significance (page 7, algorithm at top of page); wherein for each bit plane the step of scanning and transmitting is performed in a rectangular scan zone (Fig 3, the full 8x8 block, note that a square is a type of rectangle) starting from a corner of the block.

11. In regards to **claim 2**, Monro further discloses on page 5, line 20, the values are transform coefficients.

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12. In regards to **claim 3**, Monro further discloses on page 4, line 7, and page 8, line 22, the coding being performed on each block individually to obtain respective scalable bit-streams for respective individual blocks.

13. In regards to **claim 6**, Monro further discloses on page 4, line 8, a scalable bit stream being obtained by cyclically and sequentially scanning selected parts of the respective scalable bit streams of the respective individual blocks.

14. In regards to **claim 7**, all the limitations have been addressed in the argument of claim 1.

15. In regards to **claim 14**, Monro discloses a scalable bit-stream comprising blocks of values (Fig 2), the values for each block being available in an order of decreasing bit plane significance (page 6, line 14) and for each bit plane scanned in a rectangular scan zone (Fig 3, the full 8x8 block, note that a square is a type of rectangle) starting from an upper left corner of the block.

16. In regards to **claim 15**, all the additional limitations are addressed in the argument of claim 14 above.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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18. **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Monro* (WO 98/37700), as applied to claim 1, in combination with *Yamamitsu et al (An Experimental Study for a Home-Use Digital VTR*, cited in IDS filed 19 June 2002).

19. In regards to **claim 4**, *Monro* further discloses the step of scanning a transmitting comprising: initially marking all values insignificant (page 7, lines 8-16); and performing the following steps for each bit-plane until a stop criterion is met (algorithm at top of page 7): transmitting a bit for each significant value in a current bit plane (page 7, lines 17-20); transmitting an indication whether or not any insignificant values become newly significant in the current bit plane (page 7, line 25-28); and selecting and transmitting addressing information representative of newly significant values in the current bit plane (paragraph bridging pages 9 and 10), followed by an indication for each not previously significant value inside the scan zone whether the value has become newly significant (page 10, lines 3-8) and a sign bit for each newly significant value (page 10, lines 12-13).

20. *Monro* does not expressly disclose selecting and transmitting dimensions of a rectangular scan zone.

21. *Yamamitsu* teaches in Fig 5 and page 453, first paragraph of section 3.2, selecting and transmitting dimensions of a rectangular scan zone.

22. *Monro* and *Yamamitsu* are combinable because they are both from the art of transmission of DCT coefficients.

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate *Yamamitsu*'s transmission of a rectangular scan zone as *Monro*'s coefficient addresses.

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24. The suggestion/motivation for doing so would have been to compress many of the zero values easily (Yamamitsu, end of 1st paragraph of section 3.2).

25. Therefore, it would have been obvious to combine Yamamitsu with Monroe to obtain the invention as specified.

26. In regards to **claim 5**, both Monroe (page 11, lines 12-17) and Yamamitsu (in the second paragraph of section 3.2) further disclose parts of the bit stream representing the newly significant values are entropy encoded.

27. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe (WO 98/37700), as applied to claim 7, in combination with Jiankun Li et al (*An embedded DCT approach to progressive image compression*, cited in the IDS filed 19 June 2002).

28. In regards to **claim 8**, Monroe discloses an encoder comprising: a device as claimed in claim 7 (see the argument of claim 7).

29. Monroe does not expressly disclose a truncator for truncating the scalable bit-stream at a certain bitrate. However, Monroe teaches on page 8, lines 15-16, that transmission may be stopped part-way through if transmission time is limited and/or limited bandwidth is available, and on page 13, lines 14-15, the coder being instructed to keep sending bits until a certain compression target has been reached.

30. Jiankun Li teaches in the paragraph bridging the first and second columns on page 202 a truncator for truncating a scalable bit-stream at a certain bitrate.

31. Monroe and Jiankun Li are combinable because they are both from the art of transmission of DCT coefficients.

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32. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Jiankun Li's truncator into Monroe's encoder.

33. The suggestion/motivation for doing so would have been to regulate the transmission if limited bandwidth is available (Monro, lines 15-16) and to easily achieve rate-control (Jiankun Li, paragraph bridging the first and second columns on page 202).

34. Therefore, it would have been obvious to combine Jiankun Li with Monroe to obtain the invention as specified.

35. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe (WO 98/37700), as applied to claim 7, in combination with Kleihorst et al (*Implementation of DCT-domain motion estimation and compensation*, newly cited).

36. In regards to **claim 9**, Kleihorst discloses an encoder (Fig 1b and Fig 5) comprising: a device (Fig 1b, DCT); and a memory for storing a previous frame (Fig 1b, Loop Memory); the device being arranged to furnish the bit-stream to the memory (Fig 1b, Fig 5, and page 58 Memory Control Aspects).

37. Kleihorst does not expressly disclose the device as claimed in claim 7 or the bit stream as scalable.

38. Monroe teaches the device as claimed in claim 7 (see argument of claim 7) and the bit stream being scalable (see argument of claim 7).

39. Monroe and Kleihorst are combinable because they are both from the art of transmission of DCT coefficients.

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40. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Monro's device as Kleihorst's DCT.

41. The suggestion/motivation for doing so would have been to reveal an image as soon as transmission commences (Monro, page 13, line 24).

42. Therefore, it would have been obvious to combine Monro with Kleihorst to obtain the invention as specified.

43. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Monro and Jiankun Li, as applied to claim 8, in further combination with Fujikawa et al (U.S. Patent 4,972,260, cited in IDS filed 19 June 2002).

44. In regards to **claim 10**, Fujikawa discloses a camera system (Fig 20) comprising: a camera (ref no 20, Fig 20); and an encoder (ref no 24, Fig 20).

45. Fujikawa does not expressly disclose the encoder as claimed in claim 8 or 9.

46. Monro and Jiankun Li teach the encoder as claimed in claim 8 (see the argument of claim 8).

47. Fujikawa, Monro, and Jiankun Li are combinable because they are from the art of image transmission.

48. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Monro and Jiankun Li's encoder as part of Fujikawa's camera system.

49. The suggestion/motivation for doing so would have been to provide an improved method of image compression (Monro, page 1, line 20).

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50. Therefore it would have been obvious to combine Monro and Jiankun Li with Fujikawa to obtain the invention as specified.

51. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Monro and Kleihorst, as applied to claim 9, in further combination with Fujikawa et al (U.S. Patent 4,972,260, cited in IDS filed 19 June 2002).

52. In regards to **claim 10**, Fujikawa discloses a camera system (Fig 20) comprising: a camera (ref no 20, Fig 20); and an encoder (ref no 24, Fig 20).

53. Fujikawa does not expressly disclose the encoder as claimed in claim 8 or 9.

54. Monro and Kleihorst teach the encoder as claimed in claim 9 (see the argument of claim 9).

55. Fujikawa, Monro, and Kleihorst are combinable because they are from the art of image transmission.

56. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Monro and Kleihorst's encoder as part of Fujikawa's camera system.

57. The suggestion/motivation for doing so would have been to provide an improved method of image compression (Monro, page 1, line 20).

58. Therefore it would have been obvious to combine Monro and Kleihorst with Fujikawa to obtain the invention as specified.

59. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro (WO 98/37700), as applied to claims 1 and 7, respectively.

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60. In regards to **claim 11**, all the limitations are obvious as pertaining to the corresponding method of decoding to claim 1's method of encoding.

61. In regards to **claim 12**, all the limitations are obvious as pertaining to the corresponding decoder to claim 7's encoder.

62. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Monro and Jiankun Li, as applied to claim 8.

63. In regards to **claim 13**, all the limitations are obvious as pertaining to the corresponding receiver to claim 8's encoder.

Conclusion

64. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher T. Sukhaphadhana whose telephone number is (703) 306-4148. The examiner can normally be reached on 9a-5p M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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